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STOPWATCH ON THE WORLD

BY DANIEL R. GILGANNON

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Every member of the U.N. received the note which said: " . . . Give us peace within a month or I shall destroy the earth utterly." And only two men believed the sender to be capable of carrying out his threat—two men, bucking red tape, trying to find the terribly sincere atomic physicist, Chetzisky, before the deadline!

EXTRACTS, HOSPITAL CASE HISTORY No. 3007:

Patient admitted 11.45 a.m. in coma and severe shock. Pulse weak. Temperature 95. White cell count less than 2,000. Blood draining off into tissues, indicating generalised purpura. Immediate whole blood transfusion given.

DIAGNOSIS: Radiation illness. Exposure considered lethal. Probably about 1,000 roentgens.

2.30 p.m. White cell count now down to 500. Response to aureomycin treatment, favourable . . . 3.10 p.m. Hematocrit reading remains high at 101 . . . 3.55 p.m. Lab reports show karyorrhexis developing swiftly as more and more cells are ionised by 'hot' isotopes in patient's body . . . 4.40 p.m. Geiger counter set up at bedside to check progressive radioactivity of the human atomic pile . . . 5.10 p.m. Guided by hematocrit readings, blood transfusions increased, supplemented by albumen . . . 5.50 p.m. Patient conscious. Suffers violent spasms of pain. Morphine barely suffices. He appears thoughtful, moves head weakly . . .

CHAPTER 1

WITH a great effort I turn my head and see the sun going down behind the colour-splashed ridges of the Coastal range. It's the last sunset I shall ever see and the end of a day that a madman with an atomic stopwatch meant to be your last.

Every cell inside me seems a glowing coal. The geiger counter clicks off a slow, steady staccato. Suddenly I find my body arching itself convulsively in a wrackjng outbreak of pain. There is the quick sharpness of a needle in my arm and mercifully I am numb.

Armstrong, his giant frame hunched over in the chair, watches me with a suffering look new to those hard, cold eyes of his. A good man and a loyal friend. If he weren't as stubborn and resolute as a bulldog, you might not be sitting down to your supper to-night.

My mind is strangely clear and calm, as if washed by cool, clean winds from distant space. I remember everything vividly, the whole sequence of events that began a month ago.

I was chatting, I recall, with some students about the transuranic elements after my lecture on "The Chain Reaction of Uranium" when a lab instructor tapped me on the shoulder.

"There's an army colonel waiting upstairs in your office, Doctor Bailey."

I was frowning when I left. A reserve officer who served in Military Intelligence on the Manhattan Project, I sensed something ominous in the visit. The Korean situation already had me in an uneasy mood.

My spirits picked up, however, when I entered the office and recognised the tall dignified figure, with grizzled hair, standing by the window.

"Jim Armstrong, you old bloodhound."

"Hello, Arnold," and my hand was lost in his big fist.

Armstrong is a powerfully built man. He played a bone-crushing left end in his college days. You used to need a convoy of light tanks to make a sweep around him. I know; I played against him when I was a blocking back on the Princeton varsity. A former F.B.I. agent, he had one of the toughest and finest minds in Intelligence. Once he picked up a trail, he followed it doggedly. Like the time during the war when he went after government-contract profiteers. Despite faked invoices, bribed witnesses, and strong pressure from higher-ups, he tracked his men down and landed them in jail.

"Now, Jim, what's on your mind?" I said after we were both comfortably seated.

He put his hand in his tunic and brought out a letter which he handed me.

"I want you to read that, Arnold. Yesterday every member of the United Nations received a similar note. No one takes it seriously, regarding it as the work of a peace crank. I'd like to hear what you think about it."

I put on by glasses and opened the letter.

Dear Sirs:

You are herewith given notice to bring peace and freedom to all peoples within thirty days from this date. We are sick of your broken pledges, your compromises with principle, your verbal shilly-shallying. Give us peace within a month or I shall destroy the earth utterly.

Chetzisky.

I RECOGNISED the name immediately. "Chetzisky." A brilliant Polish physicist, a refugee who fled the twin tyrannies of Germany and Russia. Unknown to all but a few, he had played an important role in the Manhattan Project. His opinions and work had won the respect of the Comptoms, the Oppenheimers, the Seaborgs; even, it's said of Einstein himself.

His small face, with oddly shining eyes set close together, came vividly to mind. The last time I saw him was in March, 1946, en route to St. Louis for the convention of the American Association for the Advancement of Science. I met him on the train out of Chicago. His conversation was bitter with denunciations of the world's fumblings toward peace.

"We scientists," Chetzisky had said, "give man the means to aid the suffering, to conserve the strength of the toiler, to bring more comfort and leisure to all. But does man appreciate our work? No! He uses our every work to steal from his brother, to cheat, enslave, even to kill him."

His eyes became glinting points as he spoke. His guttural tones grew indistinct as emotion choked him. He was a scientist of a rare order. Yet he was a humanist, too; the suffering he knew as a young Pole, son of tragically poor parents, made him that way. Chetzisky was savagely impatient of the stupidity of man, who built himself a hell instead of a paradise. Science, he felt, could find a way to put mankind on its best behaviour.

"I see your point, Doctor," I had said. "But science has given the world a dose of the atom bomb and it hasn't started behaving."

"Yes, I know. But there must be a way. An enforced goodness is better than none at all." He had fallen into a brooding silence, and I had left him to go to my berth. Next morning I had found Chetzisky still in the lounge car, wrapped in thought.

"WELL, Arnold, what do you think?" asked Armstrong, breaking in on my recollections.

"Frankly, Jim, I believe he could do it; he's that kind of man."

"That makes two of us," said

Armstrong, his fingers thrumming on the side of his chair. And after a while, "Only two of us."

"You mean to say the government isn't going to make even a routine check?"

"That's right, Arnold. The Korean affair has sidetracked everything else. Of course, they may be right; it may only be a hoax. But I have a hunch it isn't. That's why I came to you."

"I have never known you to have a wrong hunch yet, Jim. I'll go along with you."

"Thanks, Arnold." Armstrong lit up a cigarette and after the first long puff went on, "Have you any idea how Chetzisky could do it? You're a scientist; you should know."

"Well, Jim, it's a fantastic possibility and it calls for some fantastic conjectures. Perhaps he's found a way to produce a chain reaction right down into the earth's core; perhaps he can produce a radioactive cloud of colossal proportions. Then again he may have a way of activating uranium, thorium, and radium deposits all over the world by ultra-high frequency radiations."

"You don't think," said Armstrong, "that there might be atomic bombs cached in strategic places throughout the world, ready to be set off on a certain day by time mechanisms or confederates?"

"Hardly. That would call for such widespread activity and the work of so many hands it couldn't escape detection. Besides, to achieve the annihilation Chetzisky promises would take thousands of bombs. Such production is beyond us as a nation, never mind an individual."

Armstrong got up and walked restlessly about the room. "Arnold, I was only worried when I came here; now I'm terrified."

"What do you plan doing, Jim?"

"We've got to catch up with him fast. We can't take the chance it's a hoax." The square jaw hardened and the muscles tightened in the lean, weather-beaten face. "Will you help me, Arnold?"

"Of course. I can easily get a leave of absence for government business and . . ."

"You won't be able," Armstrong broke in, "because it isn't government business. Remember there are only two of us who believe this note. Whatever help we'll need I'll have to wangle by pulling my rank." He pointed to the colonel's eagles on his shoulders.

"But I have six more lectures to deliver this semester, Jim; that will tie me up for three weeks."

"That can't be helped. When is your next class?"

"Tuesday. My lectures are Tuesdays and Thursdays."

"Good. That gives you lots of time to work with me between lectures. Beginning right now."

"But—"

"Start packing some things. I'll arrange for you to fly to the atomic labs and take up Chetzisky's trail from there. You'll have the entire week-end to dig up something." He took me by the arm and hustled me out of the office.

While I rummaged in my rooms for a luggage case and packed some clothes, the energetic Armstrong sat on my bed smoking a cigarette and filled me in on the details he had rounded up in the past twenty-four hours. The man was a wonder the way he had gone to work unofficially on the Chetzisky case while still handling a regular official assignment on the leakage of troop movements.

"Doctor Chetzisky got a year's leave of absence from the atomic labs; that was eight months ago. A month ago he dropped out of sight altogether."

"Did he tell anyone where he was going?"

"No, he didn't. But he did have an interesting chat with a visiting English chemist, Doctor Chaslington, the Nobel prize winner. Told Chaslington that our fission methods are as out of date and wasteful as the first automobile. Chaslington didn't press him for further information. Matter of good taste and manners

with the Englishman. Besides, he probably figured Chetzisky was simply projecting his fancy into the future."

I grunted as I snapped the suitcase lock shut. "By the way, Jim have you traced any of the letters yet?"

"No." Armstrong paused to light a fresh cigarette. "That's what I'll be doing while you're away. Ready?" He dropped the burnt-out match in an ash-tray and swung my bag off the bed.

FIVE hours later I was air-bound out of Washington for the atomic labs. As the lights of cities and towns flashed below me, a panicking sense of responsibility seized me. Two of us alone were trying to save two billion people from a deadline of annihilation; forced to do it in our spare time as if the rescue of a planet was a casual hobby for leisure hours. I struck an angry fist into the palm of my hand; a sickening feeling of hopelessness took me by the pit of the stomach.

My glance fell on the newspaper open on my lap. A lovely debutante stared up at me, smiling. "Wedding Set For Next Month," the caption under the picture announced. If there is a next month, I thought. Millions like the debutante were thinking of some bliss next month would bring — the young mother-to-be; the old couple approaching a golden anniversary celebration; the prisoner awaiting release; the author looking forward to his first published book. If Armstrong and I failed—I shook off the thought of it and turned to the sport page. The print grew dim behind a procession of images of happy brides, bright-eyed old couples, beaming, confident young men, and I fell off into an uneasy sleep.

At the airport the Director of the Atomic labs was on hand to meet me and take me to his home for breakfast. I ate hurriedly and waited with evident impatience until my host drove me over to the atomic labs. He showed me into Chetzisky's office and the hunt had begun.

The office was a small neat room at the end of a corridor. I inspected every nook and cranny of the place. I took out the desk drawers, looked for stray papers, leafed through the scientific volumes in the bookcase. I checked the wall calendar for notations or circled dates. I searched everywhere and found nothing.

From the office the Director drove me over to the "prefab" residential section where Doctor Chetzisky's assistant, Roger Budnick, lived. He was just sitting down to a last minute coffee when we came in. The Director introduced us and left. I joined Budnick in a coffee and questioned him about the Doctor. He answered frankly but he had no information.

Disgusted and discouraged I accepted Budnick's offer to ride with him to the labs. His 1938 Chevrolet was parked in front of the house. I noticed the badly dented fender as I walked around to get in the car, and commented on it.

"I got it the same night Doctor Chetzisky had his accident at the lab."

I froze in the act of sliding into the seat beside him. "What accident?"

"Oh, the doctor was doing some work alone one night. Something went wrong and he telephoned for me to come over right away. When I got there everything was all right. He apologised for disturbing me."

"Did you notice anything out of the ordinary?"

"No, I don't think so. Except the Geiger; it gave a count a little above normal."

Somewhere here was a lead. I felt it, but I couldn't seem to get my hands on it. "Did he have any visitors about that time?"

Budnick lowered his head, studying the gravelled road in a concentrated attempt at remembering.

He shook his head slowly. Then his memory stirred. "Yes, I remember. A day or so before the accident he had a visitor. Some geologist, I

believe; that reminds me, too: that night in the lab the Doctor had one of those boxes mineral samples are kept in. It was very heavy, as if it was solid lead."

Excited now, I shot my questions in rapid fire.

"Do you know the geologist's name? . . . Would you remember it if you heard it again? . . . Good . . . Can you get the day off? . . . Then go back home and start remembering that man's name for all your life's worth. Get a telephone directory. Go through it. Try anything but recall that name."

CHAPTER 2

I LEFT Budnick a little dazed by my emphatic manner and whipped over to the headquarters of the atomic labs. There I checked on back visitors' lists but evidently the Doctor's geologist friend hadn't visited him on the job. I dropped in at the telegraph office and wired Armstrong in Washington for a list of Chetzisky's acquaintances, the names of the members of the National Academy of Sciences, Association for the Advancement of Sciences, the Geological Society, the OSRD.

Then I went back to Budnick and began a mental third degree, using a rhyming dictionary, a genealogical compendium and the collection lists from an old church bulletin. Hour after hour I kept it up. Others had seen the Doctor's visitor, but only Budnick knew the name. It was the only clue I had to go on.

After eight solid hours, broken only by coffee and sandwich snacks, Budnick was begging me to call off the grilling. "Give me a break. Let me get a little sleep." He clutched his head as if he were trying to keep it from flying apart. His eyes were swollen and red.

"All right," I said; Budnick was at his limit. Besides, I had to wait for Armstrong's reply to my telegram.

Budnick rolled to the floor and went to sleep on the spot. I sank down in an armchair, tired, but too tense to sleep, and waited.

Three hours later Armstrong's reply came. I ripped the yellow envelope open.

CANNOT GET INFORMATION YOU REQUESTED BECAUSE OF NEW SECURITY REGULATIONS.

Armstrong.

I slumped back into the chair, swearing silently at every bureaucrat in Washington. Served them right if we let Chetzisky fry them. But it meant being fried ourselves; I looked over to the snoring Budnick and decided on a trick I had seen Army interrogators work during the war.

"Come on, Budnick," I said shaking him. I called to his wife to bring some fresh coffee. After he had gulped down two steaming cups, I opened up on him again.

"Abeles, Aberon" . . . For two hours I shot names at him from a telephone directory without let-up. My voice turned hoarse. Budnick's eyes went sick and he began to turn green, the colour of corroded copper.

This was the moment.

I stopped my staccato fire and walked over to the window. Silence settled in the room like a velvet hush. It was soothing, like cool cloth on a fevered forehead.

I went over to Budnick, offered him a cigarette, and lit it for him. He took a long, contented puff. Casually I placed an ash tray at his elbow.

"Thanks," he said.

Then, taking a grip on my banjo nerves, I spoke as quietly as I could, "What did you say his name was?"

"Pilon."

The name sprang from his lips before he realised it. He stared at me dumbfounded, then he was on his feet, yelling like a man suddenly freed from a nightmare. "That's it. Pilon. Pilon. Why didn't I think of it before?"

I said amen to that. Exhaustion took hold of me. I just wanted to sleep. But first I had to wire Armstrong to find out all he could about a geologist named Pilon, first name

unknown. Then, without bothering to crawl between the clean sheets, I fell on the bed in the Budnicks' spare room and sank into a black void that kept receding into a deeper and blacker void.

EXTRACTS, HOSPITAL CASE HISTORY NO. 3007:

6.05 P.M. Patient rapidly weakening. White cell count now barely 100. Pulse very feeble. Transfusions now given continuously. Emergency call to Vancouver to fly in fresh supply . . .
6.10 P.M. Pain more intense. Morphine given at increasingly frequent intervals. Patient still appears rational.

The days following the visit to the atomic labs and the Budnicks were, I remember, tedious, floor-pacing days.

Back home at the University I mechanically prepared my lecture notes and waited tensely for word from Armstrong. Tuesday came without news. I gave my lecture, stumbling stupidly several times, so great had the strain on me become. I could stand it no longer and immediately after class I phoned Armstrong in Washington.

He sounded high-strung himself. Unable to get official co-operation, he was being forced to dig up the information on Pilon by devious methods. "We have to get official support, Arnold," he snapped angrily. "Otherwise, some of these Washington worshippers of red-tape, clerks parroting. 'That's another department, sir,' and 'put it through channels' sticklers are going to kill any chance of our tracking down Chetzisky."

"And kill two billion people," I added with wry humour.

When I hung up, I had my mind made up. I was going to look up an old Princeton schoolmate, Nevil Oxford, now a famous newscaster for the Federal Broadcasting Company.

NEVIL was sipping coffe from a paper cup as he bent over the news bulletins on the clattering teletypes when I entered his office in the F.B.C. Building. After a preliminary exchange of the usual alumni gossip I got down to cases and told him about Chetzisky.

"And you really believe he could do it, Arnold?"

"I do. Most certainly."

Nevil's face hadn't much colour in it now. "Come on," he said, "Let's go downstairs; I need a drink."

Over scotch and sodas I hammered away at him, trying to get him to break the Chetzisky story on his eleven o'clock broadcast.

"I can't Arnold. We've been asked to lay off the sensational stuff. Besides, it would start a panic. Remember what happened a month ago when some jaded announcer pulled the gag about the Russians being in the outskirts of the city."

"But, Nev, it isn't a case of Orson Welles tom-foolery; it's a life and death necessity of stirring the government to action through public opinion."

"I can't." He turned to the bartender and ordered a double scotch. No soda this time. "It isn't that I don't believe you, Arnold. It's—ah, hell."

He threw down his drink quickly. For a moment he stood twirling the empty glass in his hand, staring at the lone amber drop rolling in arcs at the bottom. "You know, Arnold, I'm scared. Scared stiff," he said suddenly, turning to me. He looked at his wristwatch. "I'm on in half an hour; maybe I will tell them."

I watched him walk steadily out of the bar, his shoulders set squarely in an attitude of defiance. I toyed with a drink for twenty minutes, then went upstairs to the studio reception room to listen in on Nevil's broadcast. Twice during it he paused significantly as though he was going to break the Chetzisky story, but each time he must have lost his nerve. Or the effects of the scotch had worn off too quickly. Disappointed, I left without bothering to say goodbye to him.

Thursday I phoned Armstrong

again. He had no word on Pilon. He had succeeded, however, in tracking down the man who sent out Chetzisky's letters. The man was a retired school-teacher, an old friend of the physicist, to whom Chetzisky had given a number of letters and telegrams to be sent out according to a prescribed schedule. That was as far as the school-teacher's participation went.

The next few days I acted like a caged lion, my eyes cocked fearfully on the calendar, waiting for something to happen. My nights were sleepless. It was nerve wracking to stand by and watch time run out on the world. And on myself. At first, my stomach simply turned without relish from food; soon, it was turning sick at the sight of it.

A SPECIAL delivery came from Armstrong Monday night. It was a teletype he had torn right off the machine and rushed to me.

IDENTIFICATION MADE AS HECTOR PILON. AGED 34. DOCTORATE IN GEOLOGY, COLUMBIA U. SPECIALIST IN RADIOACTIVE ORES. MEMBER OF COMMISSION NOW CHECKING URANIUM DEPOSITS IN CONGO. WAS PRESENT IN U.S. DURING PERIOD QUERIED.

There was a hastily written postscript. "Will arrange passport, plane passage, etc., for you. Draw some money from bank for expenses. Armstrong."

My heart pounded. The Congo! The site of the world's richest uranium deposits, it would be just the natural workshop for Chetzisky.

Perhaps, I mused, trying to reason out a pattern, this fellow Pilon discovered or heard of a new ore find in, say, the jungle area east of the famous Katanga district, and told Chetzisky about it.

Of course, I admitted to myself, there was the problem of how the Doctor could get equipment into the area unnoticed. But maybe the answer lay in what Chetzisky had said to Chaslington; maybe there was no equipment problem. Who could tell but that Chetzisky may have found a simplified method of handling and working radioactive ores? He had told Chaslington our present methods were utterly outmoded, hadn't he?

It took Armstrong nearly a week to arrange for my trip to the Belgian Congo. He sent cables to Belgian officials at Leopoldville and to George Disney, chief of the commission with which Pilon was working, inviting their cooperation. In this way he hoped that the prestige of his title and name would lend a semi-official tone to my mission.

Meanwhile, Nevil Oxford phoned me twice, inquiring about our search for Chetzisky. His voice betrayed his uneasiness.

On the morning of my departure from Idlewild the New York Times, as if given confirmation to our conjectures, carried a front page story announcing a new uranium deposit in the Katanga area. Two university scientists who assayed samples stated the ore was among the highest grade yet discovered. Yield about three kilograms per ton.

As I boarded the Constellation I was confident that the chase was coming to an end. I was feverish with a sense of an approaching climax. For a long time I sat in quiet, optimistic thought, staring out the window port at a blue monotone of sky.

After lunch served by a stately blonde stewardess, the Englishman across the aisle struck up a conversation with me. He knew Africa very well, having served there many years for the Unilever enterprises.

He tried to teach me Swahili in one easy lesson, a sort of Esperanto devised by the Arab slave-traders and the lingua franca throughout Africa. I was interested, but a poor student. When I finally crawled into my berth at day's end, it was to dream of tangled jungles of African cedar and wild rubber trees, with limbs festooned with great, wrist-thick vines and monkeys scolding from the

tree tops; and through it all the steady chatter of natives saying over and over again, "Simba," "Mungo," "N'Gana," "Bwana," stray bits of Swahili floating in my mind.

When I awoke, we were three hours out of Santa Maria in the Azores after refuelling. I took out my pocket calendar and checked off another day. Only twelve more remained to Chetzisky's deadline.

The plane swung down over the west African coast and then turned inland. Thirty-two hours after leaving Washington, it touched down on the runway at N'Dolo airfield in Leopoldville, Belgian Congo.

"Zero hour," I thought with a quiver of excitement as I stooped through the cabin door onto the landing ramp. On hand to meet me was George Disney, head of the commission, who drove me to the Hotel Albert where I was to put up. He was the leisurely type. Pilon, he said, was up country. He could be called down, or I might go up, just as I wished. In any case I was to consider myself a welcome guest of the Disneys. Disney's conversation had a soft, easy charm. He sipped his aperitif without any sense of urgency, an affable victim of the tropical languor.

I proposed leaving right away to meet Pilon. His eyes took on the hurt look of a polite host whose suggestions have been refused. I pressed my point and he reluctantly consented to arrange transport. He left without finishing his drink, a silent rebuke for what he felt was my unseemly haste, I suppose.

In half an hour I was flying over the wooded savanahs of Kwango towards the mountains of Lualaba Kasai. The plane set down at Katanga eight hours later, where I fretted for twenty minutes before the commission jeep picked me up for the bumpy ride along a piste through a forest of giant trees.

CHAPTER 3

I FOUND Pilon at camp, sitting in his tent in the middle of a jungle clearing, making coffee over a Primus stove. I introduced myself. He said he knew I was coming; had received a message a few hours before from Disney. I accepted his coffee and eased into a casual interrogation.

I wove my opening questions around bits of information I had gleaned of Pilon's movements from Disney and the jeep driver. I wanted to test his straightforwardness.

But I had to be careful about my questions. Having no official credentials, I dare not overstep my mark and draw a challenge for them. Disney had accepted me, without question, solely on the strength of Armstrong's cable.

"Just think," I said with the proper air of wonderment, "last Tuesday I was lecturing quietly in a classroom and here I am sitting in the jungle. What were you doing last Tuesday?"

His blue eyes narrowed. "Tuesday?" He paused. "Yes, I was checking ore samples up in the Lake Mwera region."

That was true, I knew. Pilon continued to answer me truthfully and with apparent frankness. But I was not satisfied; his eyes had a sly, mocking look to them as if he were really aware of the purpose of my visit and enjoyed this verbal sparring, I distrusted him.

Suddenly he broke in vehemently on one of my queries, "Why all these questions? Am I suspected of subversive activities?"

I said nothing, scrutinizing him closely. I felt he was acting, his anger a mere pretense to force me to the point of my visit. I stalled for time to think, refilling my cup from the pot on the Primus.

"May I see your credentials, sir?"

I froze in the act of stirring my coffee. Was Pilon just being nasty? Or had the timidity of my questioning given me away?

I couldn't afford to be trapped. Not only would my trip to the Congo be fruitless, but worse, Armstrong would be hauled on the carpet for his part in it and severely disciplined I myself would probably face ugly disloyalty charges. A bold bluff was my only way out.

I laughed good-naturedly. "After having seen Mr. Disney I didn't expect to have to carry my papers around with me. They're a downright nuisance to carry around in this outfit I'm wearing." I gestured to the khaki shorts and short-sleeved shirt I had on.

He laughed, a forced, hollow laugh. He was uncertain of his ground.

"Of course," I went on, "if you wish, we could go to Leopoldville and . . . "

"No, that won't be necessary. I'm sorry. I lost my temper. Living alone in this jungle wears a person's nerves a little thin."

I nodded understandingly.

"Dr. Pilon, I really came down here to make inquiries about Doctor Chetzisky."

"Yes?" His eyes took on that cunning look again. He knew something, I was sure. I wondered how much.

"You knew him, I believe."

"I did. In fact, I visited him once, you know." He looked at me, a suppressed grin trembling in the corners of his thin mouth, with the air of a mouse that has deftly sidestepped the swiping paw of a cat.

"A peculiar man, wasn't he? Had some strange ideas."

"Peculiar, yes. In the same sense that Mahatma Ghandi was peculiar," he snapped at me, the blue eyes gleaming with a fanatic's adoration. "As for strange ideas, bringing peace to this fear-ridden planet can hardly be called one."

AH, so Pilon knew! He realised immediately he had given himself away and became morosely truculent; I had reached the end of the line with him. But I had one card left: Pilon's diary.

While talking to him, I had spotted the marble-edged ledger on the crate-improvised table in the corner of the tent. I was sure it was his journal; I hoped earnestly that it was.

We drank a final cup of coffee in silence while I ransacked my brain for some subterfuge to get Pilon out of the tent. In the end the whole thing was very simple. I asked him if the jeep was ready to take me back to Katanga. He went outside to see.

I went quickly over to the table, slipped the ledger from under two other books, technical journals, and leafed swiftly through the pages. They were dated. I was in luck; it was a diary.

I turned to the date of Pilon's reported visit with Chetzisky and there I found the entry:

> JUNE 21:—Visited Doctor Chetzisky to-day. A brilliant man, deeply concerned for the world. His words moved me as he spoke of policing the world into peace. His hopes, he told me in strictest confidence, rest on an ore discovery by Ian MacRoberts of British Columbia, a university geologist, who seems to have found a new radioactive element easily controlled. The Doctor has received a sample from MacRoberts to-day to verify the preliminary spectroscopic analysis. When I left Doctor Chetzisky shook my hand warmly. I wished him success and promised secrecy. He is one of the obscure great men of our times.

I barely finished reading when Pilon's footsteps sounded outside. I closed the book quickly and greeted him when he entered. The jeep was ready, he said, and wished me a pleasant and safe trip to Katanga.

The jeep was just starting off when a native ran up, shouting that Bwana Pilon wanted to see the driver. I sat in the car, waiting uneasily, remembering that I hadn't slipped the ledger back in place; I hoped Pilon hadn't noticed.

Fifteen minutes went by. I climbed out of the jeep and went in search of the driver, who was sitting in Pilon's tent, regarding his watch from time to time.

"Doctor Pilon asked me to wait here for twenty minutes before going," the driver explained. "He said something about he might have a package."

My eyes wandered to the corner table. I drew a deep breath. The ledger was gone.

"I guess we can go now, sir." The driver left the tent.

I followed him and got into the jeep with a growing foreboding. The sun was low in the sky, fading rays dissolving into twilight. I hunched low in my seat, the flesh creeping on the back of my neck as if a gun was sighted on it. Now that Pilon knew I had read his diary, there was good chance he might try to keep me from getting back alive to Katanga. With the ruthlessness of the fanatic Pilon might feel he owed that much to "the great man" Chetzisky.

A mile from camp the trail broke out of the jungle onto a swaying suspension bridge across a deep gorge. The driver inched the jeep across. Looking down I felt nauseous; a fall and a man was a shredded pulp.

Half way across the span it happened. A rifle cracked. The air whined at my ear. The driver slumped stupidly against me and the jeep swerved crazily out of control. I leaped out on the bridge just as the jeep dropped into the gorge. I ran a few yards and hurled myself to the boards; a bullet whistled over me.

I was on my feet again. Another shot rang over. I thanked God for the sway of the bridge; it put the crimp in anyone's marksmanship.

I disappeared into the shelter of the jungle on the other side. The battle was joined; it was Pilon's life or mine. He couldn't let me live, and I couldn't let him. If I got away, he would get in touch with Chetzisky who probably wouldn't wait till the deadline to pull the switch.

CROUCHED in the brush, panting and slightly dizzy from unaccustomed exertion, I watched Pilon stalking across the bridge, rifle at the ready. My breath began to come easier and my head cleared.

He was across now. He moved into the trail, eyes straining into the shadows. For a moment I had the mad notion of rushing him until I realised in what poor condition my academic life had left me for any wrestling with an outdoor type like Pilon.

Instead I would lure him to the edge of the gorge. Disturbing the undergrowth to look for a stone would be suicide; the noise would attract his attention and fire. As a substitute missile I slipped off my wrist-watch, clipped my pen on the band, and lofted them across the trail into the brush near the gorge, praying they would make enough noise.

They did.

Pilon turned sharply. For a moment he listened. I was certain he would hear my heart pounding wildly. Cat-like he made his way to the spot where my missile fell, probing the leafy undergrowth with the rifle. Then, calling on four years as blocking back at Princeton, I raced out of hiding. Pilon half twisted in surprise as I smashed into him with a rolling hip block that sent him teetering backwards over into the gorge. I can still hear that long shrill scream of terror echoing in my ear.

The impetus of my dive carried me into the bush. I disentangled myself and looked over into the dry rocky bed of the gorge. Two forms lay motionless there, in dark spreading splotches.

Thoroughly shaken, I stumbled over the bridge and back along the darkening trail to Pilon's camp, where I collapsed in a stupor on the dead man's cot, too exhausted for superstitious misgivings, and fell into a deep sleep.

In the morning a native runner went into Katanga to notify the authorities of the deaths and to have another jeep sent out for me. For two days I was held up in Katanga during the inquest and inquiry. Disney flew down to talk with me, angry that I should upset the leisurely routine of his existence. My explanations, from which I omitted any mention of Chetzisky, didn't satisfy him, but

he let matters rest rather than perturb himself by probing further.

"EXTRACTS, HOSPITAL CASE HISTORY NO. 3007:

6.35 P.M. Thrombopenia very far advanced. Blood bubbling at patient's lips. Lab reports heparin in blood stream . . .6.50 P.M. Noted radiologist flown in by jet bomber from Los Angeles. Says there is no hope. Radioactive element absorbed through lacerations in patient's body and is now fixed irrevocably in bone marrow. Patient seemed to smile at radiologist.

I wonder who that serious looking gentleman is who was just examining me. I couldn't help smiling at his pompousness; you'd think he was a judge reading out a death sentence.

Where was I? Oh, yes, back in Katanga. From there I wired the University that I would be unable to give my last two lectures of the semester. The Congo dateline on the telegram must have raised the shaggy brows of the venerable Chancellor who till then thought I was no farther away than my rooms at the opposite end of the campus.

Armstrong I had cabled immediately with the information about MacRoberts. I was sure that while I marked time in Africa he would be starting the chase in far-off British Columbia. Still, the waiting made me restive, and more so when after leaving Leopoldville I lost another day. Engine trouble forced the Constellation down at Accra, where foul weather closed in to keep us grounded.

Finally back in Washington, I ticked off another day on the pocket calendar. Only seven days more.

I went directly to the Statler where Armstrong had his rooms. He greeted me enthusiastically, ordered up some drinks, and plunged right into business. "Arnold, thanks to the lead you picked up in the Congo, we have a good idea where Chetzisky is."

Armstrong unfolded a map with places circled in red and notations scribbled in. "He is somewhere in this area north of Ootsa and Burns lakes. Trappers in the region have identified his photograph. Also we've traced some significant shipments into the area. Paraffin, boron-steel, graphite among other things."

They were significant; they were all materials that could be used in an atomic reactor, principally as moderators to control the neutron irradiation.

"Any word of MacRoberts?" I asked.

Armstrong gave me a quick briefing on the Canadian geologist. Single, fairly well off, Lan MacRoberts spent his summers away from his teaching chores at the University prospecting for minerals, chiefly in one of the least explored portions of the continent, the Rocky Mountain Trench. A transport lost there in 1940 has never been found.

Notes found in MacRoberts' lodgings in the Vancouver suburb of Kerrisdale revealed he had discovered a strange new mineral of marked radioactivity. He made his first find near Lake Babine and traced outcroppings of it as far south as lower California. From his fragmentary data MacRoberts was convinced that a vein of this mineral dipped through the earth's crust at an inclination of 27.6 degrees. Six months ago he had been given a leave of absence from the University; since then he had been seen twice in the company of a man fitting Doctor Chetzisky's description. Information indicated both had headed for the Interior.

"Well, Jim, what are your plans?"

"I have arranged already for groups of searchers to move secretly out of Prince George and Hazelton." His pencil slid over the map. "But you're the key man, Arnold; these groups will only close in on the word from you.

"You're going to fly into Tweedsmuir Park, ostensibly as a tired business man on vacation. It's not unusual up there. Even Hollywood stars like Crosby have escaped into the Tweedsmuir reserve for rest and a new horizon."

I NODDED that I understood and rubbed my day old stubble thoughtfully.

"And yes, don't bother shaving. A bit of a beard might be as good a disguise as any if you meet Chetzisky. He may still remember you."

"By the way, Jim, how did you manage to get government support for your idea?"

"I didn't."

"You didn't," I said slowly, "Then how—"

"I'm using my assignment to track down the leakage of our troop movements to the Orient as the apparent reason for my manoeuvres. What more likely than such a spy ring should have its headquarters on the Pacific Coast and perhaps a transmitter deep in the mountains." He grinned like a pleased cat.

"You mean none of the Canadian authorities knows you're really after Chetzisky!" The man's gall flabbergasted me.

"That's right."

The bell-hop knocked on the door and entered with our drinks. I gulped mine down and sagged back in a chair, hoping for my brain to clear and find all this was happening only in a nightmare, the result of overindulging in my favourite onion soup.

But it wasn't just a bad dream. " . . . above all you must creep up on Chetzisky," I heard Armstrong saying.

"Seven days doesn't leave much time for creeping."

"I know." Armstrong was grim. "But the Indian should help."

"What Indian?" I exclaimed. The nightmare feeling deepened.

"I forgot, Arnold. When Chetzisky and MacRoberts disappeared into the wilds, they took two Indians along that had been with MacRoberts on previous trips. Fortunately there was a third Indian, a young boy, who went out once before with MacRoberts. We're counting on him to guide you to wherever the Doctor is."

I mulled over that while Armstrong got on the phone and booked us on the next flight to the coast.

Fifteen hours we were in Vancouver conferring with Major Burley of Canadian Military Intelligence, a precisely neat man who made me painfully self-conscious of my unshaven face. I met Johnny Eagle for the first time. He bore little resemblance to the lithe, stern-eyed Red man of the movies. A dumpy boy of fifteen, dressed in baggy pants and a pullover, he escaped the classification of nondescript only by his eyes; they shone with a quiet luminosity, like lights through a mist. They gave me a feeling of confidence in him.

According to Johnny Eagle, the place we wanted was north of Burns Lake. He didn't know the exact spot, but he remembered two things nearby: a rain-rotted cross on a mountain grave and two peaks that MacRoberts had christened the Twins because of their identical appearance.

It wasn't much to go on, but it was something to keep alive our hopes of getting Chetzisky before it was too late.

"Good luck," Major Burley said, "I hope it won't be a wild goose chase."

"It better not be," Armstrong said tersely. "You better get going, Arnold. I'll keep in touch with you by radio from Burns Lake."

OUTSIDE the Major's office I almost collided with a code clerk hurrying in with a message. I thought nothing of it till I was on the street climbing into the car that would take me to the airport and a voice called sharply after me.

"Sir, Major Burley wishes to see you in his office right away."

I went back upstairs, cold with foreboding, suddenly recalling the excited look on the code clerk's face.

Armstrong was standing by the window, looking disconsolate, when I entered. The Canadian said nothing, but handed me a decoded message.

ATTENTION CANADIAN INTELLIGENCE: COLONEL ARMSTRONG SUSPENDED FROM FURTHER DUTIES FOR OVERSTEPPING HIS AUTHORITY. WILL REPORT BACK TO WASHINGTON AT ONCE TO FACE CHARGES.

"Now," explained Major Burley sternly, "You will understand why I must cancel your plans, sir."

I blew sky-high.

"Go ahead. Let the world blow up behind their stuffed-shirtism and quintuplicate file copies and pedantic memos and see how well that will protect them when the earth goes 'puff.'"

The Major stared at me in frank bewilderment. This "puff" business was something entirely new to him.

I felt a strong grip on my arm.

"Easy, Arnold," Armstrong was saying, a warning look in his eyes. "This is one moment when we have to keep our heads, or more than just us will lose them. Hold tight here for a day. Washington probably got Disney's report on your trip to the Congo. I think I can talk my way out of the mess. If I don't," he shrugged hopelessly, "it's all up to you."

ALL next day I sweated for a word from Armstrong. About five o'clock a call came from one of his friends in Washington. He was under house arrest, but still striving desperately to wake the Government up to Chetzisky's threat.

I drink lightly, but if at that moment I had had a bottle I would have emptied it at one swift sitting. Instead, I took an ice-cold shower to calm myself. Half-way through the shower I ran out and picked up the phone to put in a long-distance call. I had an idea.

Nevil Oxford answered. I poured out my story. His voice shook as he talked with me. I had him on the ropes and I kept pouring it on. The earth had only six days to live unless the nation did something about it. We were just a stone's throw, so to speak, from catching up with Chetzisky. What was needed was to rouse public opinion and force the complacent hand of the swivel-chair bureaucrat. As a crusher, I told him that the world-wide radio-active count had gone up five roentgens. If only he knew how absurd that was . . . but it turned the trick.

"All right, Arnold, I'll go on the air to-night with the story," he said wearily, with the tone of a man acquiescing in an inevitable surrender.

I dressed, arranged for a plane to take me and Johnny Eagle into Tweedsmuir early next morning, and settled back with a drink for Nevil Oxford's broadcast. The commercial came on. I gritted my teeth and waited. Then Nevil broke in, his voice tense and pregnant with fear: "Good evening, ladies and gentlemen. To-night I am breaking the biggest story of my career. It has taken me a long time to decide on telling it, but it must be told."

There was a pause. I sat bolt-upright. Had he lost his courage again? Then Nevil was speaking again, his tone almost inaudible. "If a letter that went out to the Governments of the world a month ago is true—and I fear horribly that it is—you and I have only six days to live. The world will end next Monday. Yet nothing is being——"

The voice was cut off and organ music filled the air waves. I stood up and flung my glass at the wall. You warn them and they throttle you; the ostrich hadn't a thing on them.

I went down to the lobby and bought a few magazines to read myself to sleep with, but at two in the morning I was still awake. I put on the radio to get some slumber music. Instead there was a deluge of breathless newscasts and special bulletins. Nevil had started things popping all right, despite being cut off the air. Curious, angry newsmen had dug up the story and spread it in the headlines of extras from coast to coast. At this moment it was being short-waved to every part of the world. Already public opinion was beginning to simmer. A special dawn meeting of the cabinet was called. I fell off to sleep smiling; there was hope.

CHAPTER 4

IN the morning when I read the newspapers on the way to Lulu Island airport, my mood darkened. While public opinion shrieked for action, successive conferences on what was to be done ended in decisions to hold other conferences on what was to be done. Horn-rimmed intellectuals argued hotly whether the Chetzisky question was not one for United Nations discussion. And we make fun of Nero who fiddled while Rome burned!

The day was clear, ideal for flying. It was the fifth day before the end of Time. I bit my lips and looked out at the earth falling away under us.

Four o'clock that afternoon our pontoon-equipped plane swept low over the spruce and jack pine and meadows of wild hay for a smooth landing on Burns Lake, our approach scattering a brood of mallard ducks. We refuelled and were off again. I intended to fly on, watching for the Twin peaks and, when darkness fell, to land on one of the mountain tarns and make camp.

Below us the sombre stands of evergreen were being swallowed up in the vast shadow spreading out from the western ridges. Turning up a valley corridor, I saw the peaks towering above us, summits capped with white and the forested flanks gashed with couloirs in which the snow gleamed.

I blinked again. The air was rough now, tossing our cabin plane, and the constant flickering of the view made my eyes uncertain and my head ache. Suddenly I became aware of the clouds, a few bedraggled tatters at first, close to the timberline, like wisps of angel hair on a Christmas tree. Then, as the plane swerved through a narrow pass and up another valley, I saw the sky devil himself—a billowing, black-bottomed cumulus rolled up on itself three miles high.

I went forward to the pilot. He was peering anxiously ahead of him. "Don't you think we'd better land soon?" I asked.

"The sooner the better, sir. I was figuring on landing up at Schwartz's, a trapper who has his diggings on a lake up aways, but we won't make it with that storm." He paused as a sudden current sent the plane off keel and he struggled to bring it level again.

"I think I'll swing west over that ridge," he pointed to a low mountain wall. "I remember a few lakes over there."

The plane banked obediently and swung round. He flipped on the radio, dialling in only ghostly wheezes.

"This country plays the devil with radio, sir. Minerals, I understand."

I went back to my seat. Across from me, Johnny Eagle sat motionless, his eyes never leaving the cabin port, on guard for the Twins. The ridge passed below us. Suddenly darkness enveloped us; we had run into a squall. The plane nosed upwards to ride above it. I shuddered. Flying blind with mountains sheering up on either side is suicidal.

When the plane finally broke through, the sun had set. Only a flash of lavender over the western rim remained of the day and soon that faded. The pilot now flew by a faint twilight that mountain snows reflected. The thunderhead cumulus we had evaded was spreading laterally towards us, threatening us with pitch-black darkness. I was uneasy; so was the pilot, who sat tautly upright. Johnny Eagle remained gazing out at the pallid landscape.

"We're all right now," the pilot shouted back. I went up front.

"There it is." He pointed down to the right. For a moment I saw nothing; then the glimmering form of a lake appeared obscurely.

The plane dipped gently towards it. The pilot's eyes strained to keep the fading glimmer in view, at the same time trying to judge the mass of darkness that was the timber. He did a miraculous job skimming in over the treetops and was just sweeping in over the water for his landing when a sudden gust struck. The plane tilted its nose up abruptly,

bucked, then dropped like a load of lead. It slapped the water hard and skidded straight for the wooded shore.

Desperately the pilot tried to bring the craft around, but it plunged relentlessly forward and up on the narrow beach, skittering wildly as it left the water. The tail cracked sharply as it whiplashed against the trees.

SLIGHTLY bruised and shaken, we climbed out, but that's all. The pilot got out his torch and we clustered about a map he spread on the ground.

"This is where we are." He indicated a spot bare of all place names and west of the area in which Chetzisky was reported. In case of an air search this would be last bit of terrain searched. It was far off our expected course. I recalled the story of the transport lost these ten years in this wilderness and an unpleasant tingling crept up my spine.

Then I remembered Chetzisky and realised with a sour humour that worrying about time in terms of years was optimistic. Time now was only a matter of three days.

And moping like this wouldn't add to them.

"Check the radio," I snapped, turning to the pilot; "see if you can raise Burns Lake."

He climbed back into the plane. The lights went on; at least, they still worked. I turned to Johnny Eagle, "You better get the sleeping bags out and turn in yourself. There's nothing to be done till morning."

I got in the plane.

"Any chance of fixing it?" I asked, watching the pilot's frantic flickering of switches.

"I'm trying to. It may only be a case of a broken tube from the jolt we had. If so, we're all right; I have a few spares."

I stayed up all night with him. A damp, palid dawn filtered through a ceiling of clouds, their gray bellies heavy against the top of the evergreen timber.

The day pased fretfully under the heavy overcast. Johnny Eagle had patched the opening in the tail and we spent the hours inside, sheltered from the drizzling cold. The pilot gave up his despairing tinkering with the radio and fell into an exhausted sleep. I followed suit.

A loud, shrill squealing brought me to my feet hours later. The radio was working again. The pilot was shouting excitedly to me. "I've got 'em. Listen."

"CXRAP. We hear you. Come in."

The pilot flipped the transmitter switch, "CXRAP calling Burns Lake. We are down in area located . . . " He went on, giving co-ordinates of our position, visibility, weather, and other data.

"Here, sir," he said, handing me the mike. "Someone wishes to speak to you."

I almost dropped the mike at the sound of the voice that boomed over the radio loudspeaker. It was Armstrong's.

Public opinion roused by Nevil Oxford's censored broadcast had forced the Government's hand and Armstrong had been placed in command of a last-minute effort to locate Chetzisky. Only two days separated the earth from annihilation.

"We can't get to you in this weather, Arnold. Sit tight and pray."

"Don't bother about us, Jim," I told Armstrong. "We're well enough set; don't waste time."

I knew he wouldn't. Afterwards I learned that he parachuted troops into the suspected area north of Burns Lake and rounded up every trapper, prospector, Indian guide and Provincial trooper to scour the region for Chetzisky.

LATE in the afternoon the low-lying clouds began to lift. Rifts appeared in the solid grayness but the drizzle kept on. I put on my raincoat and got out of the plane to stretch my legs.

The air was wet, cool, refreshing, I looked about. In places the slopes were visible as far as the timberline and even before. In others the gray

pall remained. Somewhere out of it I heard a voice calling my name, more loudly with each repetition. My eyes tried to bore through the haze and shortly a stocky figure detached itself from it, coming towards me. It was Johnny Eagle, his eyes more luminous than I had even seen them.

"I've founds the Twins," he said simply and plunged back into the mist with me close behind.

I stumbled eagerly up the slope for nearly two hundred yards. Johnny Eagle was standing on a boulder, pointing north through a great break in the low ceiling of cloud. I looked, my heart racing wildly. There they were towering in the sky, the Twins, as similar as though they were a double image seen in a badly focussed lens. I judged them to be three miles off.

I yelled for Johnny to stay put while I scrambled down the slope, ripping my pants and scraping my knees as my legs gave way under me in a patch of loose scree. Back at the plane I found the pilot putting up a makeshift antenna.

"Get Burns Lake quick," I ordered between gasps. "Ask for Armstrong."

Armstrong was elated but grimly realistic. "This must be it, Arnold; it has to be."

I knew what he meant. This was our last lead; there wouldn't be time for more.

Armstrong asked whether I could move out up the peaks and radio a report to him. I looked out of the cabin ports. Night had fallen quickly, but in the cloud blankets the clefts were widening to let feeble patches of starlight show through.

"I'll start right away," I assured Armstrong. "It's clearing here."

Johnny Eagle scouted around the lake till he found a stream flowing from the direction of the Twin Peaks. With it as a guide we set off, panting as we stumbled, slipped, crawled along and wincing as needle-pointed evergreens stung our faces.

Sometimes the stream twisted out of sight, but Johnny pushed on with the ancient woodland canniness of the great Frog tribe. There were times, though, when this mystic sense deserted him and we stood perplexed and barely visible to each other a foot away. We waited, then, for some sudden glimmer to reveal our guiding stream.

MY weary legs soon told me my estimate of four miles to the Twins was way off. About midnight we broke out of the forest wilderness high up on the timber line. The night was brilliantly clear by this time; sharply etched shadows of dark pines lay about us. Towering into the starry skies were our Peaks, their upper reaches capped with snow, with here and there a thick dark scar where a fissure lay in shadow. For the first time I saw the Twins were joined, Siamese-wise, by a low truncated mass.

Even though the going became easier, I felt more tired than before. The rarefied air sharpened the sense of fatigue and a tightness clutched at my chest. But I forgot all about it when I saw the grave. I spotted it even before Johnny Eagle cried out. The grave lay exposed in a bare patch above a clump of stunted timber; a tilted rotting cross was its only marking.

The almost unhoped-for discovery of this meagre clue to the location of Chetzisky infused me with new energy. My tiring legs revived. Johnny Eagle was hard put to stay ahead of me.

On the bare rock shoulder of the granite bastion between the Twin Peaks we came upon a trail. My pace redoubled. Johnny Eagle stared at me in frank admiration and yielded me the lead.

The trail headed straight for the blank, inaccessible face of the ridge. But as we drew near the sheer wall high up near its rim, a cleft appeared, through which the trail led. The defile was narrow, shrinking at times to the width of a man.

Suddenly the walls fell away and we found ourselves on the narrow strand of a crater lake. In its centre the dark mass of an island stood out under the starlight.

I strained for some sign of habitation but the wooded isle remained

inscrutable. We began scouting around the lake. About twenty feet from the defile entrance Johnny Eagle discovered a canoe hidden in a crevice of the crater wall. I decided against using it to reach the island. Chances of approaching unseen in it were too slim. Besides, the theft of the canoe would reveal our presence. We couldn't afford that risk with Chetzisky playing God.

We would swim out, I decided. But first we went along the shore to reconnoiter the shortest route and in doing so we spied the clearing on the island. I could make out a cabin and a long, slanting structure resembling a ramp.

This was it, I was sure.

"Johnny, get back to the plane and have the pilot radio Colonel Armstrong that I've found Chetzisky. Give him all the necessary information."

CHAPTER 5

I WAITED till Johnny Eagle had melted away and then, making my .45 as waterproof as I could, I slid into the lake. It was a short swim to the island — fifty yards or so — but I was pretty well exhausted when I dragged myself out of the water. The cold air knifed into my back and shoulder blades. It was welcome relief to crawl into the shelter of the undergrowth and rest a while.

With some of my strength back, I pushed on cautiously through the bushes and tightly-packed trees. The first washings of dawn now appeared in the sky. It was the beginning of the day that Chetzisky had chosen for the world to die.

When I came to the edge of the clearing, I stopped, my eyes probing the morning grayness. Then I stepped quickly out of the brush. Suddenly I stopped dead, afraid even to breathe. Two feet from me an Indian dozed, a rifle across his lap. It was too late; his eyes blinked open. I hurled myself on him. There was a brief scuffle and then he lay still, knocked unconscious by the butt of my .45.

I faded back into the undergrowth and waited. I thought I heard the door of the cabin in the clearing open. But nothing happened.

I let out a deep breath and started skirting the clearing, keeping in the shadows until I was in front of the ramp-like runway. I stared hard at it, trying to make out the details.

At the top of the sloping track was a cylindrical mass, the size of an oil drum. It reminded me instantly of the beer-barrel nuclear reactor, a portable affair, developed by the British physicist Robert Parker. Its purpose dawned on me: This was the trigger of the atomic gun that Chetzisky held at the temples of a planet.

I moved in for a clearer view. As I did I was brought up abruptly by a calm, even voice, its tone of command sharpened in the crisp morning air. "You needn't move any more. Just raise your hands."

I looked in the direction of the speaker, as my hands went up. Out of the shadows in front of me emerged a short man with a rifle. Chetzisky! At last!

Bundled in a heavy mackinaw, wearing a fur cap with ear muffs, wool socks rolled over the tops of his high boots, he looked grotesque, hardly the intended assassin of a planet. More like a farmer who's waited through a winter night to catch a chicken thief.

"What are you doing here?" he asked sharply. In his tone I detected a worried uncertainty. I decided on the bold approach.

"Where is Professor MacRoberts?" I demanded sternly.

Chetzisky lowered his rifle slowly. He seemed surprised; relieved too. "You're looking for Doctor MacRoberts?"

"Yes, the University became worried about him and hired me to find him, fearing he might be ill or lost in this wilderness."

"How did you come to track him here?" Chetzisky cocked his head to one side and squinted at me suspiciously.

"Well, it happens, sir, that I'm a private investigator, specialising in

missing persons," I lied with gusto. "When the University hired me to locate MacRoberts, I interviewed the man's friends, talked with the Indians, etc. And behold here I am."

I grinned broadly with affected boastfulness. Chetzisky eyed me intently. I felt grateful for my mask of beard at that moment.

"You came alone?" he asked, relieving me of the automatic in my belt.

I nodded.

The Doctor put down his rifle. "I'm sorry to appear threatening. But I have reasons. Will you come into my cabin?"

HE ushered me in front of him into a low-ceilinged house of fir logs. The room we entered was furnished with home-made chairs and a table on which a lantern burned with a low wick. In the far corner was a door leading to another room.

"My name's Roy Carlson," I said amiably as we sat down at the table, Chetzisky at one side alone, the rifle across his knees.

"I'm Doctor Hansen, geologist," volunteered Chetznisky, bowing slightly, and after a pause, "an associate of Doctor MacRoberts."

"Then where is he?" I demanded, seeking to keep the Doctor on the defensive.

"In the next room; he's very ill."

"What's the trouble?"

"Radiation sickness. A very bad case. Very painful. I have to keep him under drugs constantly."

"Why didn't you let his friends know?" My voice was angry and my anger was genuine.

"You see, Mr. Carlson, we are out of the world here. We have no telegraphic station just around the corner." He smiled an irritating, sarcastic smile.

My blood boiled. I wanted to jump him then and there, but his fingers were caressing the trigger of the rifle. "How did it happen?"

"Doctor MacRoberts and I were tracing a radioactive deposit. Without the necessary precautions he handled the ore for long periods of time. Fearfully careless." Chetzisky shook his head with the "tsk-tsk" air of a Chemistry teacher deprecating the clumsiness of a freshman student in the lab.

My brain tried to formulate a plan of action. But there should be two Indians. Where the devil was the other? I had to know before I went into action.

My head turned sharply Several groans mounting into shrill cries came from the other room. "May I see him?" I asked, rising.

"You may. Go right in, Mr. Carlson."

I went in. The air was foul from vomit. On a cot lay a twitching form, whose features became suddenly visible in the rays of the lantern Chetzisky held up behind me. I gasped. The face was puffed into fiery welts and the eyes, sunken deep in their sockets, glowed fiercely in a savage agony.

"The poor devil," I exclaimed, "it would almost be better to shoot him."

Chetzisky was shocked. "For a dog, yes. But for a man, Mr. Carlson, that is murder."

What a sardonic jest. The man who planned to wipe out two billion people rebuking an unintended suggestion of mercy killing. I was so choked with anger that I could barely answer. "Just a figure of speech, Doctor."

Outside in the other room a door slammed. Someone rushed in shouting, "Soldiers, soldiers dropping from the skies." It was the other Indian.

CHETZISKY kept his rifle aimed at my belly as the Indian poured out the details. Two planes had dropped paratroopers just outside the crater. He told the Indian to go back outside and watch and tell him when the soldiers got inside the crater.

"So you are looking for Professor MacRoberts, a private investigator," Chetzisky chuckled softly. "There is something familiar about you; I should have paid more attention to my suspicions in the beginning.

You're someone I met once. That beard confuses me."

He waited for me to answer. I had to keep him talking; the paranoic loves it. All Armstrong's men needed now was time. They were at the doorstep. "I'm Doctor Arnold Bailey of Atlantic University."

Chetzisky wrinkled his forehead.

"We met about four years ago en route to the St. Louis convention."

"Yes," he said slowly as if the recollection was gradually unfolding itself. "Yes, I remember you now. In fact, very well. We had a most interesting chat; do you recall it?"

"Something about making the world peaceful, wasn't it?"

"That's correct," Chetzisky commented with approval. "It was just my dream then. Now it's real, thanks to the unfortunate Doctor MacRoberts. You saw that incline outside. At its top is a drum filled with crude radioactive ore that MacRoberts discovered. The whole is charged with three milligrams of the new purified radioactive element. It was extremely easy to isolate. A simple precipitation process involving some hot ethyl iodide and a 0.1 Normal solution of cuprous chloride . . . "

He stopped abruptly as he detected a slight forward motion on my part. I threw him a question to dissolve the tension.

"What is the name of the new element?"

"You must admit it is difficult to call it 'MacRobertium.' Besides, it hasn't the scientific flavour," he said with an amused smile. "The Scots weren't meant for scientists. I call it simply 'MCR'."

He motioned me to fall back a few steps and then went on.

"The remarkable property of MCR is its diffusion rate, something like two centimeters a minute, assuming a specific gravity of 2.7 for the medium. MacRoberts traced a vein containing MCR ore to this point and for the past two months I've been impregnating it with refined MCR, converting it into a slow, controlled reactor."

The Doctor was warmed up now, and I didn't dare interrupt for fear of bringing him out of his paranoic trance. Armstrong might arrive any minute. I hoped.

"When the time comes," he continued, "and I believe it is now, I will remove the moderator bar from the drum at the top of the incline and release it. It will strike a trigger mechanism which will catapult it into the face of the vein of MCR ore. The critical mass will be exceeded and a planetary atom bomb will have been born."

His eyes were shining now with the madness of his dream. "The chain reaction will proceed through the earth's plastic mantle and down into the liquid core."

He paused to enjoy the pleasure of his speculations. "Then within ten hours I calculate the earth will exist no more. It will become a mushrooming cloud of cosmic dust. It deserves no better," he added bitterly; "I tried to give it peace."

SOMEONE entered the room. It was the Indian reporting that the soldiers had penetrated into the crater.

"Watch this man," Chetzisky commanded. "Shoot him if necessary."

He left the room. I heard the cabin door shut and its sound echoed like a sentence of doom. In the long strained silence that followed I thought frantically.

Then the silence was broken. The cabin door opened again, dragging footsteps approached the room. Eyes bloodshot, one hand holding his head in evident pain, the Indian I had beat down with the butt of the .45 appeared in the doorway.

He glared at me in sudden recognition and with the roar of an enraged bull lunged at me. The other Indian tried to hold him back. That one moment was my opportunity; I picked up one of the home-made chairs and crashed it down on their heads. While they stumbled about groggily. I dashed out of the cabin after Chetzisky.

He was standing at the head of the ramp, working what appeared to be

a lever. He heard me coming and fired his rifle at me twice. He missed my zigzagging figure. He acted quickly now, releasing the lever, and turning round, braced himself to meet my charge. We fell to the ground, Chetzisky clinging to me savagely, rolling me over and over until I realised what his game was, to move farther and farther from the ramp. I twisted my head and looked back.

My blood went cold. The drum was no longer at the top of the incline. It was half-way down and moving faster.

I shook Chetzisky off and started for the ramp, but he threw out his foot and tripped me. Sprawled out on the ground I looked up to see the drum swiftly moving towards the trigger mechanism that would catapult it into the head of the vein. I couldn't stop it now; time had run out on the world.

And in that black moment when the earth trembled on the rim of nothingness, the conditioned reflexes that I had acquired in four years of football asserted themselves. I was on my feet rushing madly and then I was sailing through the air. The breath was knocked out of me as I landed on the ramp. Something hard struck my side and kept crushing me.

At first I felt nothing. Suddenly a cold sweat broke out all over me. Chetzisky was beside me now, screaming at me and pulling me.

"You'll kill yourself," he kept shrieking.

I fought him off. I couldn't let him pull me off the ramp. Only my body stood between the earth and its annihilation.

"Don't be a fool; let me help you," he pleaded. He was a transformed being now; no longer the madman destroying a planet but a man trying to save the life of another human being. It was too late for such sentiment now. I didn't want to be saved.

He came at me again. I got one arm loose and pushed a fist at him. He went reeling backwards. He changed his tactics and started to pull me by the feet. I couldn't get at him. My body started to move. I clutched fiercely to one of the ramp rails.

He came around in front of me to loosen my grip. I pushed him off. He picked up a stone and came at me again. He meant to rescue me, like it or not. He raised the stone to knock me unconscious.

A shot rang out. Chetzisky sagged forward and dropped to the ground.

Canadian soldiers in battle dress were crowding around me. Armstrong with them. I felt sick, my head spun, but I managed to tell him what to do about the drum and the ramp.

"Okay, Arnold. We'll get you to a hospital right away."

The world spiralled down out of sight down a cone of darkness until I woke up in this hospital bed hours later with these flaming embers inside me. It won't be long now. I can read it in Armstrong's eyes.

There's strength in the feel of that friendly hand now that the world inside me is going to pieces. Around me a soft blackness is settling . . .

EXTRACTS, HOSPITAL CASE HISTORY No. 3007:

7.20 P.M. Patient relapsed into coma. Pulse almost imperceptible . . . 7.32 P.M. Patient pronounced dead.

THE END

THE FINAL FIGURE

By SAM MERWIN. JR.

Was it a wild talent that MacReedy had, or was it just prophetic genius that led him to figure out new, improved ordnance weapons and make models of them—before the armed forces had them? Whichever it was, MacReedy was both valuable aud dangerous—and when the General saw MacReedy's final figure, the weapons following the mobile rocket A-missile launcher . . .

THE General was in mufti. He stood briefly within the entrance of Models and Miniatures, Inc., feeling a mild envy of the civilians who brushed past him, coming and going. They looked so easy, so relaxed, so casual in posture and dress. He was wistfully aware of the West Point ramrod that was his spine, the razor-edged bandbox neatness of his banker's grey suit, the Herbert Hoover four-squareness of his homburg, the stiff symmetry of his dark-blue four-in-hand.

He found compensation in visualising some of these casual civilians in uniform—then shuddered, and moved on into the shop, poise and assurance restored.

Save for the display-counters and wall-cases, the shop was softly lighted. And although it was well filled with customers and lookers of all ages there was about it the hushed quality of a library — or a chapel. Even the children talked softly as they pointed at and discussed this 100-gauge English locomotive or that working jet-model of a Vought-Chance Cutlass. They were well-aware of being in sight of wish and dream-fulfilment.

He moved slowly toward the rear of the shop, past the glass counters that displayed gaily-painted models of carriages, coaches and early automobiles; past the fire-engines in red and gold; past the railroads; past the planes and past the tiny ships—from Phoenician galleys and Viking vessels with gaudily-decorative sails and shields to the latest bizarre-decked atomic aircraft carrier.

He stood in front of the miniature soldiers and, for a happy moment, recaptured the glamour of parades and gay uniforms that had beckoned him into a carrer whose colour and band-music had long since been worn off by the nerve-wracking tragedy of battle and the endless ulcerating paper-work of peace.

Busman's holiday, he thought. Sailors in a rowboat in Central Park. And he was glad he had not worn his uniform.

Each miniature-soldier manufacturer had a glass shelf to his own wares, labelled with a white-cardboard rectangle upon which his name had been neatly brushed with India ink. Here were the comparatively rude Britains, mass-produced, work-horses of toy armies throughout the Western World since before his own boyhood.

Here were the heavy and magnificent Courtleys, specialising in medieval knights and men-at-arms, beautifully caparisoned in all colours of the rainbow. Here were the Barker Napoleonics, the one-inch Staddens, the incredible half-inch Emery Penninsulars—each a costly little work of art that defied the enlarging of a magnifying glass. Here were Comets in khaki and grey, perfect models of the guns, tanks and trucks of America, England and Soviet Russia.

To his left along the counter a chunky blond citizen, with wide cheek-bones and a faint Slavic accent, was discussing a sale with the clerk. The General was only subconsciously aware of him as he moved in that direction, marvelling a little at the

painstaking craftsmanship, the endless hours of eye-destroying labour that had produced such microscopic perfection—as well as at some of the follies with which men had attired themselves in the name of martial glory.

He recalled having read of an order, issued at the time of the Mexican War, that the collars of all officers in the United States Army should rise to the tips of the ears. It was scarcely surprising, he thought that the Seminoles—clad virtually in nothing at all—should have been able to stalemate an army thus uniformed in the steaming swamps of Florida.

"They're great, aren't they?"

The voice came from a lower level, and the General looked down to meet the excited blue eyes of a curly-haired male moppet who could scarcely have been more than twelve. There was an aura of friendliness about the leather-jacketed-and-corduroyed youngster, a sharing of manifest interest, that pierced the hide of the old soldier.

He smiled back and said, "Quite wonderful," and was briefly afraid his words had been too condescending. But the quick answering smile on the youngster's face revealed that he had said the right thing.

He followed the lad's rapt gaze to a shelf he had not yet studied. The name on its cardboard label read MacReedy and as soon as he saw the tiny figures it supported, his interest became focused upon it to the exclusion of all other shelves and their fascinating displays.

MacReedy was very evidently a specialist. His subject was American soldiery, with its chief emphasis on artillery—from early Colonial times to the present. As one of the highest-ranking officers in the Ordnance Department of the United States Army, the General's critical interest was aroused.

Here were the demi-culverins of the Manhattan Dutch, the brass fieldpieces and mortars of the French wars and the Revolution, the light horse artillery cannon of the Mexican and Civil Wars, along with pear-shaped Dahlgren and Parrot siege-guns, each piece with its crew of aimers, loaders, rammers and ammunition bearers.

Here was the crowbar-like, dynamite guns that protected New York and Boston and Baltimore against threatened British invasion during the Newfoundland fisheries disputes, back in the 1880's; and the complex disappearing cannon that followed them. Here was the old standard three-inch fieldpiece on which the General had cut his own eyeteeth; here the French 75 and 155, long and short, and the mammoth railway guns of World War I. Here was even a model of the postwar American 75—the ill-fated cannon that had proved so accurate on the firing-range, and so utterly useless after a half-mile over a bumpy road.

Here were the weapons of World War II, from M-7 105 self-propelled howitzer to the 240-millimetre tractor-borne cannon. And here were more recent weapons, the 120-millimetre radar-aimed anti-aircraft cannon; its newer automatic 75-millimetre cousin; the new 90-millimetre turret-mount for the Walker Bulldog, the 105-gpf in the turret of its new heavy tank.

THE General felt a stir of alarm. There had been a leak somewhere; release on this model was not scheduled for another month. He would have to report it, of course. Then he shrugged, inwardly. Leak or not there was small cause for alarm: They must long-since have managed to scrounge test-run photographs, if not copies of the blueprints themselves.

Still, a leak was bad business with the country so precariously balanced in a combustible world-situation. He looked at the next weapon, the last in the line.

And froze . . .

Here was the XT-101, with its rear-mounted turret and twin dual-purpose automatic 75-millimetre cannon. Here was a weapon, complete, that had not been completed in actuality—there was trouble with the turret, of course, there always was . . . .

It couldn't be—but it was. The General discovered that his mouth had slackened in surprise; he closed it

firmly. He eyed the turret of the miniature, noted how the automatic range-finding devices, that were causing trouble at Aberdeen, were incorporated into the turret itself, in a neat armoured sheath.

He thought, Lord! I wonder if that's the answer . . . Then he thought that, if it were, the whole world would soon know it.

"A honey, isn't it?" said the curly-headed lad. He added, wistfully, "It costs twelve dollars and eighty-six cents, with tax."

"It's a honey, all right," said the General automatically. Actually, he was appalled—a possibly decisive weapon on sale to all and sundry for twelve dollars and eighty-six cents! Of course the intricate inner workings weren't there. But They knew enough about radar and automatic cannon to be able to figure it out from the model.

The General took direct action. He went to the clerk and said, "How many have you?" pointing to the subject of his question.

"Neat—perfect workmanship," said the clerk, donning his selling clothes.

"How many?" the General repeated.

"Only the one in the case left," the clerk replied. "I just sold the last one in stock a moment ago. We've only had four delivered so far."

"I'll take it," said the General in a fever of impatience. He had to get it out of public view at once—although he had a sick sensation of already being too late. He recalled the Slavic appearance, the accent of the man who had made the last purchase.

When the clerk had wrapped it up, and he had paid for it, the General asked to see the manager, who proved to be a pleasantly tweedy individual. He produced his card and said, "I'm afraid this man MacReedy has violated security-regulations. Where else is his stuff marketed?"

The manager's expression was not friendly. He said, "Mr. MacReedy's miniatures are marketed nowhere else; he has an exclusive contract with us." He evidently resented the General's gruff approach as much as the General resented not being addressed by title.

Civilians! the General thought. The damned fools don't understand—they haven't the slightest idea . . .

Aloud he said, "Where can I find Mr. MacReedy? I'm afraid I'm going to have to talk to him."

"Uncle Angus? He lives next door. I'm going home now—I can show you."

The General had forgotten the male moppet. He looked down in surprise, then up at the manager, who said, "It's quite true. This is Toby. He helps Mr. MacReedy; he's a collector himself in a small way."

The General took Toby back with him to the hotel. He knew he should be burning up the wires to Washington with news of his horrendous discovery, but somehow he wanted to see it through himself—as far as he was able. Besides, there were certain puzzling facets that would scarcely look plausible in the dehydrated prose of an official report to Security.

It smacked almost of the supernatural. Eyeing his small guest, who was happily and rather messily devouring a piece of French pastry, accompanied by a bottle of ginger-ale—sent up by room service—the General suppressed a chill that rose from his coccyx to his cervical vertebrae.

Like most veteran men of action, the General did not decry the supernatural—such decrying was the property of armchair logicians. In the course of his long career he had seen too many things that defied logic or logical explanation. He said, "Ready to take off, Toby?"

"Yes, sir," said the lad. He was properly impressed with the General's rank—revealed to him by the assistant manager in the lobby. Then, with a sudden shadow of anxiety, "You aren't going to arrest Uncle Angus, are you, sir?"

The General managed a chuckle. No sense in getting the lad scared. "No, I just want to talk to him."

"I'll go with you," the lad offered. "Most grownups have a hard time talking to Uncle Angus. Even dad . . ." Whatever was his father's problem with the prophetic model-maker remained unstated, as Toby managed to wrap lips and teeth around a large final piece of pastry. He then went to

the bathroom to wash his hands before they went downstairs, to where the General's car was waiting.

2

THE sight of the huge olive-drab Cadillac limousine with its two-starred flag and white-trimmed and be-fourragered sergeant-chauffeur seemed to awe Toby, who lapsed into more occasional monosyllables during the drive through the late afternoon to his Long Island home. It was as if, since the General was in mufti, the lad had not quite been able to believe in his reality—until official car and chauffeur offered proof.

This was quite all right with the General, who was desperately trying to rearrange the chaos of his thoughts into some sort of order. He knew he was being dangerously imaginative for a man in his position. But what if this MacReedy actually could foresee the future, at least in its military manifestations?

Granting this impossibility, how could the man be used? The General shuddered at the thought of "selling" anyone with such a gift to the Combined Chiefs of Staff—those quiet-eyed, low-voiced, strictly pragmatic men on whom, perhaps, the future of country and world depended. Even if they by some wild chance accepted the impossibility, he knew full well what would be the tenor of their thoughts—and therefore of their questions.

One of them would be sure to say, "Very well, General, but if we put our planning in the hands of this man—seeking a short route to decisive superiority of armament—how do we know he won't make a mistake, or lead us up the garden path? How do we know he hasn't been planted for this very purpose?"

How did he know? The General decided he didn't. Yet how could any man with such a private power be permitted to exercise his rights of free citizenship? He damned MacReedy, the enemy, the world and himself, and got resettled in his corner of the soft rear seat.

They had left the sun behind them, setting in a dust-pink mist behind the soft-edged towers of Manhattan. By the time they reached Flushing it had begun to snow—big soft flakes whose crystalline dissimilarities were almost visible to the naked eye as they settled against the car windows into wet evanescence. Up ahead the twin windshield-wipers ground them silently and methodically into wet-rimmed circle segments.

"I hope it lasts," said Tob from his window. "I got a sled for Christmas. I haven't been able to use it."

"You'll get your chance," said the General. Damn it, he wondered, what kind of man was Angus MacReedy—if he was a man. Somehow the silent snow, the waning traffic, the oncoming twilight, combined into a sense of ominous portent. It was as if the car were standing still, while a perilous future rushed toward it.

"We turn left at the next traffic light, sir," said Toby.

They turned. They skirted a thinly settled swampy area on a narrow road, against a background of scrubby pines. The sprawling metropolis might have been on some other continent, some other planet. They met only one car—a long black sedan, that slithered past them on the skiddy road-surface, missing them by inches.

The house where they pulled to a halt at Toby's direction was not large. It had been put up early in the century, and its motif was that of the high-gabled Swiss chalet. Mercifully the snow gave it a touch of quaintness, almost of rightness, despite the absence of lowering alps. Toby pointed to a similar structure about a hundred yards further down the road. "That's where I live," he said.

MACREEDY answered the door. He was a tall, angular man with a long, angular face—from which small blue eyes peered alertly. He wore a grey glen-plaid reefer that was buttoned wrong, a dark blue-flannel shirt and covert slacks that needed a press. He said, "Hello, Toby—you've brought company, I see."

"This is General Wales," said the lad very politely. "General—Uncle Angus."

The General had a ridiculous fugitive memory—"Alice, mutton—mutton, Alice." He shook hands with the model-maker.

"Honored, General," said MacReedy. He ushered them into a living room, whose desk and tables and mantel were literally covered with miniature American soldiery. He said, "Sorry the place is such a mess"—picking up the morning paper from the carpet beside a worn but comfortable-looking easy-chair—"but I wasn't expecting callers. I just had to boot out some sort of a mad Russian."

"What!" The General didn't mean to bark but couldn't help it.

MacReedy grinned quietly and said, "This fellow said he was assistant military attache, or something. Offered me all kinds of money to do some work for him."

"What did he look like?" the General asked.

MacReedy, filling a corn-cob pipe that appeared to be near the close of its short life, paused to say, "Like nothing special—not nearly as distinguished as you, General. Blond, chunky fellow with a bit of accent. Not a lot, but enough."

The General exchanged glances with Toby. He knew, without asking, that the boy was thinking the same as himself; it was the man who had bought the XT-101 model in the shop earlier that afternoon.

MacReedy got his pipe going and said through a small blue cloud of smoke, "How does the exhibit look, Toby? Have they got it right?"

"Pretty good, Uncle Angus," said the lad seriously. "They got the Mexican and Black Hawk War units mixed up, but I guess we can't blame them for that."

"I guess we can't," said MacReedy. He turned to the General, added, "Now, sir, what can I do for you? Or need I ask?"

"I have a hunch you know pretty well what I'm after," said the General. "My predecessor must have given you some idea."

"I've been afraid of this," said MacReedy with a sigh. "It's what I deserve for trying to show off to Toby."

"I don't understand," said the General.

"I was trying to show Toby how good I was," he said, ruffling the boy's curly hair. "Then, when I got that seventy-five AA-gun doped out ahead of time—and it proved correct—I had to go one step further. I should never have let the model out of the house."

"I'd like to see your workshop," said the General.

Angus MacReedy removed his pipe and said, "Come along."

THE basement ran the length and width of the house. Although furnace and fuel-storage were walled off in a separate room at one end it still provided a sizable workroom, enough for three long wooden tables. On one of them MacReedy carved his tiny figures and cannon and vehicle parts from solid chunks of lead. Another was used for painting, a third for drying.

On this third table were a half-dozen more of the XT-101's—along with a group of Confederate cannoneers and their field-pieces, some Indians, a small group of knights in armour, and what appeared to be Roman Legionaries.

The General pointed to these and said, "I didn't know you went in for them. I thought you were strictly an American specialist."

MacReedy puffed at his pipe, then said, "I'm doing these for Toby—in return for his services as delivery boy and all-around helper. I'm trying to teach him history in reverse."

"Odd concept," said the General.

"It works—doesn't it, Toby?" MacReedy said to the lad.

"Uncle Angus says it will help me when I take history in college," Toby said stoutly. "This is King Henry the Fifth at Agincourt—just like Sir Lawrence Olivier in the movie. And this is Genghis Khan. And here is Tamerlaine, and Charles Martel, and Caesar . . ."

"I see," said the General. He was a little overwhelmed at so much evi-

dence of one man's individual craftsmanship and industry. He eyed the XT-101's with malevol at interest, then studied a nearly-finished weapon on the carving table. It looked like . . .

It was! One of the just-conceived, self-reloading rocket-launchers on armoured mobile carriage with amphibious tractor-treads. He said, his voice dry and tight, "Where'd you get this, MacReedy?"

MacReedy wandered over to stand beside him. He said, "I didn't get it anywhere; it just seems like the logical next step in ordnance, General. I've had pretty good luck in the past, figuring things out his way. I had the Sherman tank plotted back in nineteen-forty—just before I was drafted. I hadn't dared trust my hunches till I saw my first one two years later at Pine Camp."

"You were in the Army?"

"Six years," said MacReedy. "Two years here in camp and Officers' Candidate School, then two abroad—Sicily, Anzio and the Rhone Valley. I stopped a piece of shell near Lyon, and put in the rest of my time in hospital."

"Rough," said the General though he had neither the time nor the interest for sympathy. "Tell me how you 'figure' these things out. The Sherman tank, if you wish."

MacReedy wagged his head modestly. "It wasn't too difficult, once I'd seen the General Grant. That one obviously wouldn't do; it was too high, needed a full-pivot turret. Yet the basic design was there—anyone who'd thought about it could have done the same. But it was a pleasant shock to learn I'd been right."

"I see," said the General. "And you did the others by the same process—and you're always right?"

"Not always," replied MacReedy. "I fluffed badly on the atomic cannon. I expected a longer barrel for greater muzzle-velocity and range; here, I'll show you." He led the way to a dusty wall shelf where imperfect and broken models crowded together. There was the A-cannon—not as it had appeared, but as the General knew it was going to look in two years, when certain needed changes were made.

He said, "An understandable error. Unfortunately, mobility had to be considered." He paused, looked MacReedy straight in the eye. "I hope you didn't show any of this to your—previous visitor."

MacReedy laughed. "Hardly," he replied. "I'm American, never fear. I'm just one of the lucky few who has been able to make a good living out of my hobby; I have no axes to grind."

"We may have an axe to grind with you," said the General with a hint of grimness. The rocket-launcher and the improved A-gun were like the one-two punch of a good heavyweight-hitter. He went back to the XT-101, said, "About this twin-mount tank—how'd you figure we'd mount the automatic machinery outside the turret?"

"That wasn't too difficult—if I'm right; and I gather I am," said MacReedy. "There's simply too much stuff to put inside a tank-turret; you've got to mount it outside. And that means plenty of protection, which means an extra armoured sleeve. So . . ."

THE General said. "MacReedy, why are you showing me this? I could be an impostor, a spy."

"With that official limousine?" the model-maker countered. "I doubt it. Besides, Toby vouches for you."

"Risky," said the General.

"Besides," said MacReedy with the suggestion of a smile, "I've seen your picture in Life magazine." He paused, added, "After all, in my humble way I'm a bit of an ordnance nut myself."

"I don't believe you," said the General flatly—"I mean about working these things out through logic and guesses. But however you do it, surely you can appreciate that you're much too dangerous to be walking around loose. Especially since They know about you. I'm afraid I'm going to have to take you back with me."

"Nothing doing," said MacReedy. "I can take care of myself. Besides, this is my home. I like it here."

"You're being close to treasonable," said the General.

"Not I—you are," came the incredible reply. "You, not I, are attempting

to deny a citizen his rights under the Constitution."

"Damn it, man!" the General backpedalled quickly. "Can't you understand? Suppose They got hold of you—They'd have you dishing up our innermost secrets to them ahead of time. I don't need to tell you what that could mean in the present world situation."

"You don't, General," said MacReedy. "But I don't think They'd get much out of me—much that was useful, I mean. I can't think clearly under drugs or torture; I'd be more of a menace than a help. I explained that to my visitor before you came. He seemed to believe me."

"Maybe he did," said the baffled General, "but don't bet on his superiors. You've been an Army officer, MacReedy; I can have you called back into service."

"With a permanent medical discharge?" MacReedy countered.

The General sighed. He knew when he was beaten. He said, "You'll have to stand for a guard then—twenty-four hours. We'll keep them out of sight as much as possible." He wished the whole business were rationally explicable to his own superiors. As it was he knew his hands were tied when it came to drastic action.

"I suppose it's necessary," said MacReedy sadly, but not defiantly; "I should never have tried to show off."

"It's too late for that sort of thing," said the General. "I'm going to have to take some of your models with me—it's too late to do much about the new tank, but I'll have to have the rocket-launcher and the A-gun. And I'll want your promise not to indulge in any more such experiments except as I request."

"That I am glad to give you," said MacReedy and there was no doubting the sincerity of his words.

"I'll pay you f. them," offered the General.

"Of course," replied the model-maker; "my name isn't MacReedy for nothing."

As he handed over a couple of hundred dollars the General found himself almost liking the man. Damn these screwballs, he thought. He wondered when he was going to wake up and find it hadn't happened. It couldn't be happening, any of it. But the perilously-perfect models, of weapons that were yet to be, felt terribly real to his touch.

He said, "Toby, run upstairs and tell Sergeant Riley to come down here and take some stuff out to the car." And, when the boy was gone, "MacReedy, will you do some work for us?"

"Of course," said the other. "A man gets feeling a bit useless making toy soldiers in times like these."

"The pay won't be much . . ." the General began.

"I can afford it," said MacReedy with the unexpected generosity of the true Scotsman. "What do you want me to do?"

"They have a new weapon building," said the General. "All we've got are a few spy-photographs—not very good, I'm afraid."

"What sort of weapon?" the model-maker asked.

"That's just it—we don't know," replied the General. "I'm going to send you what we have on it to-morrow; I'm hoping you can give us a line on its purpose." He paused, added grimly, "As it is we don't know how to meet it. We haven't an inkling. It's given the Chief a whole new patch of grey hairs."

"I'll do what I can," said MacReedy. "But don't expect the moon."

"All I want is the nature and purpose of that weapon—if it is a weapon," was the General's reply. Then Toby and Sergeant Riley came clumping down the stairs and the conference was at an end.

Before he left the General gave Toby five dollars. "That's for bringing me here," he told the lad. "You'll be seeing me again."

"Yes, sir," said Toby. He didn't sound at all surprised.

WHEN he got back in the car alone, the general counted the models on the seat beside him—one rocket-launcher, one A-gun. He said, "Riley, how are we fixed for gas?"

"Pretty good, sir," came the reply.

"We can make the city okay, sir."

"Fill up before you get there," the General told him. "We're going right on through to Washington tonight."

"But, sir, I haven't notified the motor pool at Governor's Island," the Sergeant protested.

"Damn the motor pool!" the General exploded. "I'll take care of them. Now get going; we've got a long drive ahead."

The big car gathered speed through the thickening night snow.

The General slept most of the way, after he and the Sergeant stopped for dinner at a Howard Johnson restaurant on Route One, just north of New Brunswick. After a shower, a change into uniform and breakfast, he was in sound operating-shape when he reached his office at the Pentagon the next morning.

He arranged for a round-the-clock guard of Angus MacReedy's house, ordered investigation of the model-maker's record, had a copy of the complete file on the possible enemy weapon forwarded to Long Island by special messenger. Then he summoned a special meeting of top-echelon Ordnance brass and produced the models of the XT-1/1, the self-reloading rocket launcher and the improved A-gun.

If such a Broadway-Hollywood term as sensational could be used in any connection with a Pentagon conference, the General's meeting with his colleagues might have qualified for it. Experts were quick to understand the practicability of the models, quick to recast their plans accordingly.

Within the week, he was summoned before the Combined Chiefs and commended by that body for his clear-sightedness in cutting Gordian knots of the most baffling order. There was talk of a third star and appointment as Chief of Ordnance once the somewhat-doddering incumbent was retired, come June. He was a sort of brown-haired white-haired boy. He was interviewed by representatives of three national newsweeklies.

Though he wore his new honours gracefully, actually the General was thoroughly uncomfortable. He was far more concerned with the safety of the country than with his own advancement; and his ego was much too solidly based to permit him enjoyment of honours that were not rightfully his.

The worst of it was that he couldn't explain. If he told his superiors that his "inspirations" came from the intuitive head of a toy-soldier maker on Long Island who even denied his intuition in the name of logic—not only would his own career be permanently damaged, but the value of MacReedy's models would be suspected. So much so that they might be disregarded entirely—thus retying the Gordian knots that were stymying the armament programme.

MacReedy's file was laid on his desk one morning by a plump WAC secretary. It was exactly as the model-maker had stated: he was American-born, only child of a Scottish engineer and a German-American woman from Wisconsin. He held an engineering degree from a small polytechnical institute in upstate New York.

His war-record was exemplary. At the time of his wound in Central France, MacReedy had been a captain in the Combat Engineers, wearer of a silver star won at Anzio. There was a complete medical-report on the wound and treatment, whose technical jargon was too much for the General. All he could gather was that it was a head-wound and brain injury, which had rendered the model-maker unfit for Army duty.

He took the report to his opposite number in the Medical Corps, a man whose abilities in brain-surgery were mentioned in hushed voices at Johns Hopkins. Over a highball he told the whole story for the first time, hoping it wouldn't be received with hoots.

It wasn't. The white-haired surgeon looked long and meditatively at his drink. Then he said, "Kermit, I can't begin to account for it; I have muddled around in the human brain enough to know that what we like to call our scientific knowledge is at best empirical. You say this man had his ability before he was wounded?"

"He built a Sherman tank two years

before we did," said the General. "Yet he claims the whole process is purely logical."

"Logic!" exclaimed the brain-man with a scorn that matched the General's own on the subject. "Logic is hindsight, Kermit. When our brains, by some intuitive process of progressive thought, reach a desired point, our egos reach backward to give the process a sort of order we call logic. Actually we seldom know how we get where we do; but we're too damned conceited to admit it.

"What in hell do we know about the brain?" he went on. "I knew a perfectly healthy young girl once, who was killed when she was standing beside her horse—the horse sneezed, jerked his head up, and jolted the side of her jaw. Yet back in seventeen eighty-one, when Arnold ordered the massacre at Fort Griswold, one old rebel was bayonetted, had his skull smashed open so that his brains were oozing out on the ground. He recovered and lived for forty years afterward, sane as you please. And they didn't have fellows like me, not then. If they had, he'd probably have died on the operating table."

"In other words you don't know," said the General.

"I don't know, Kermit," replied the other. "Another drink?"

THE next day the international situation showed signs of serious deterioration, and the General took a plane to New York. All the way up he thought of something else the Surgeon-General had said to him—"One thing I have learned. It isn't exactly in my province, but I've run into it enough to make an observation.

"Whenever I've met anyone with what might be called a special gift—psychic or what have you—I've found them scared to death of it. Damned if I know why . . ."

He ruminated a little before continuing. "You'd think they'd be delighted—but they aren't. They either run to religion, and try to drown it in ritual—or they try to explain it away by some rationalisation. Like your friend.

"Then you're willing to accept the fact he has a supernatural gift?" the General asked.

The brain-man shrugged and said, "Supernatural—supernormal—he's got something, if what you tell me is true. Can you think of a better 'ole?"

CHAPTER IV

WHEN he was driven up to the Long Island chalet early that afternoon, the General was pleased to see a command car parked unobtrusively off the road, a sentry sitting in an impromptu sentry-box made of pine bows, that commanded a good view of the approaches. At least, he thought, They wouldn't find MacReedy easy to get at. According to the reports he had seen there had been no further attempts.

Toby opened the door. He said, "Hello, General, this is fine. We were going to send you a message tonight."

The General shook hands and said, "Progress?" and, when the boy nodded excitedly, "Why aren't you in school?"

"It's after three o'clock," was the devastating reply, as Toby led him toward the cellar stairs. The General wondered briefly how much he had managed to forget in his fifty-two years."

Angus MacReedy was working at his carving table with a blow-up of the spy-pictures tacked to the cellar wall in front of him, a pile of rough-sketched plans on the table. He rose and said, "I was just doing a little polishing, General. But you hit it about right."

"Good," said the General. "Got it solved?"

"I think so," said the model-maker "Take a look."

It was an eerie-looking item—a sort of stove-pipe mounted on a disc, surrounded by a flock of flying buttresses. Frowning the General peered at it, then looked at the blow-ups on the walls. From the correct angle, the similarity was ominously unmistakable. He said, "What in hell is it, Captain?"

MacReedy grinned. "Looks weird, doesn't it? It had me stumped for the

better part of a week. There's only one thing it could be and that's what it is. Look . . ."

He picked up a sort of minature torpedo from the work-table, dropped it down the stove-pipe. The thing worked like a trench-mortar. Some spring in the base of the tube sent the rocket flying in a high arc to smack the opposite wall and drop to the floor.

"It's a mobile rocket-launcher," he said needlessly. "I'd lay odds it can be used for atomic warheads."

"Good Lord!" cried the General. His mind was in a racing turmoil. The problem with the Nazi V-1 and V-2 weapons during World War II had been the immobility of their launching platforms. If They had managed to get around it . . .

He thought of an insuperable obstacle, said, "But what about backblast? Don't tell me they've found a metal able to stand up under the heat of launching."

"I doubt it," replied MacReedy seriously. "They use this barrel to give her a boost like a trench-mortar shell. My hunch is the rocket doesn't fire until she's well off the ground."

"It is accurate?" the General asked, thunderstruck.

"Is a trench-mortar accurate?" the model-maker countered: "Ask anybody who's been in Korea."

It was a wallop for the General. Atomic rocket-launchers, mobile rocket-launchers that could function as artillery, could outrange the A-gun perhaps by hundreds of miles. And if the missiles thus fired could be guided —he could see no reason why not— the A-gun was already obsolete.

He sat down on a packing box and mopped his brow although the cellar was far from hot. He said and his voice was unsteady. Thanks, MacReedy, I think maybe you have done it."

"I think so," said the model-maker. He wasn't boasting, but he was sure of himself. "You want to take it along with you? It shoud be quite simple to make. I've got a few improvements over Their supports, I think."

"If it's the last thing I do," said the General, rising, "I'm going to see you get credit for what you've done."

MacReedy made a gesture of dismissal. "Don't let it bother you, General," he said. "I like my work. Maybe you could arrange for me to make some models for the War College."

"Hell, why not the Smithsonian?" said the General. "Why not both? We ought to have a historical ordnance-exhibit somewhere. And you're the man, no doubt about it."

As he left with the precious model MacReedy asked. "By the way, General, what do you want me to work on next?"

The General hesitated, then said, "Follow your hunches—logic if you will. Let's see what the next weapon after this one is going to be. You've been ahead of us the rest of the way."

"I'll see what I can do," said MacReedy with his quiet smile. "Let me know how things come out."

"That I will," said the General. Toby walked with him to the car and the General gave him another five dollars. He wished he could do something more for both of them; but at the moment it was out of the question.

IT was almost six months before the General got back to the Long Island chalet. Thanks to his now fully-established reputation as an inventive genius, he was able to get a full speed ahead order on the new-type mobile rocket-launcher. MacReedy's improvements were valid, and the Department experts came up with further simplifications. By the time they were ready to go in to production they actually had the weapon self-propelled, were well ahead of them on mobility, range and accuracy. It promised to be a military revolution.

Then the General had to make a flying trip around the world—to visit American military installations in Western Europe, in Italy and Spain, in Africa, Formosa, Japan and Korea. He got back to Washington, a thoroughly tired man, and walked into both his promised third star and the Chiefship of the Department. Also into an international situation worse

than any since September, 1939—when the Nazis invaded Poland.

They were pushing aggressively in both Europe and Asia, pushing with an arrogance that suggested they felt they could win in a walk if the free nations of the world offered large-scale military defiance. Rumours of a terrible secret weapon were being bruited about—not only in hush-hush military circles but in the public prints as well. One picture magazine of national circulation had actually published an article stating that They had mastered pushbutton warfare.

The General, and the Combined Chiefs made a hurried and secret trip to Aberdeen the day after his return. There, on the proving ground, they watched a big transport-plane land on a makeshift airstrip. They saw a small group of soldiers unload from the plane an odd-looking tractor-mounted weapon that resembled an immense stove-pipe with certain refinements.

They saw a lean sausage of a rocket rolled into a door near the base of the tube, watched a trifle nervously while it was elevated almost vertically An order was barked, a button was pushed—and the rocket rose rapidly from the tube with a dullish report, rose to a height of perhaps a hundred yards.

Then, suddenly, its tail blossomed smoke and flame; it rose with a new lease on life, to disappear in to the heavens, leaving a trail of smoke behind it. Pointing to a prefabricated building that stood alone, a mile away, the General said, "Watch that target, gentlemen," and lifted his field glasses to his eyes.

A minute later—fifty-eight seconds was the exact time—the structure was suddenly obliterated by a tremendous explosion. The General sighed and said quietly, 'That was TNT. We have a stockpile of atomic weapons ready."

"But the accuracy!" exclaimed a weathered full admiral. "With the wind and the earth's rotation to consid . . ." He hesitated, then said, "Oh, a guided missile."

The General nodded, and said, "We can put batteries of these new missile-launchers, completely-mobile and with atomic heads, anywhere in the world within 24 hours by plane. They have a reasonably effective range of small targets of just over two hundred miles—with air-guidance, of course, over target. Gentlemen, I think They are in for a surprise."

They got it two days later—in another special test of the new weapon. The General didn't even bother to watch it. His attention was focussed upon a stocky biond man who wore the gaudy shoulder-boards of a lieutenant colonel, and was present as assistant military-attache and qualified observer. His face remained impassive, save for a slight twitch of the lips, when the target was obliterated.

Which was enough to satisfy the General.

DENIED a sure-thing victory They were forced to call off Their war—with violent internal results. It became quickly evident that They were going to be busy for a long time keeping order within their own boundaries. The international situation became easier and happier than at any time since Locarno.

The General, who was due shortly to receive his fourth star, played an active role in the military portion of peacemaking. He had little time even to think of Angus MacReedy and little Toby and the miracle-workroom on Long Island. When he did think of them it was with an inner warmth that was almost devout, with a resolve to see that the model-maker received a satisfactory reward.

Then one morning, while skimming through a stack of reports, a phrase caught his eye. It read—

> . . . and in accord with current fiscal retrenchment-policies, all personnel on special duty were called in for terminal assignments. These included . . .

The report was from Second District H.Q. at Governor's Island. With a sinking sensation he scanned the list. There it was—special sentry-detail to guard house of Captain Angus MacReedy (ret.). He picked up a telephone and called Governor's Island direct.

Yes, the detail had been withdrawn more than a week earlier . . . No,

there had been no report of trouble . . . Hold on, there was something in the morning paper . . .

The General made it in less than two hours. Angus MacReedy had been shot in the back of his head the previous evening, while building model soldiers in his cellar workroom. A boy who lived next door, and heard the shot while on his way to pay MacReedy a visit, had seen the murderer drive away in a black sedan. He had given the alarm and local constabulary had picked up the trail and given chase. Ignoring a red light, their quarry had been killed when his sedan was hit by a truck. He had no identification on him but appeared to be a stocky blond man of about forty. An alien pistol, recently discharged, had been found in the wreckage.

The General and Toby stood alone in the strangely empty workroom. Only an ugly, dark stain on the floor remained to mark the recent violence that had occurred there. The General looked at the table, then at the boy. He said, "Toby, do you know what your Uncle Angus was working on recently?" He felt a little ashamed thus to try to pick the brains of a murdered man through a child.

"He'd been pretty busy with orders from the shop," said Toby thoughtfully. "And he'd just finished that." He nodded toward an unpainted lead miniature on the work-table.

The General looked at it closely, and felt the blood drain from his face. He had told MacReedy to try to work out the next weapon after the guided-missile launcher . . .

"Are you sick, General?" Toby asked, breathing in on his abstraction. "You mustn't take it so hard, sir."

"I'm—all right, Toby," he said. "It's been a bit of a shock, that's all."

"It's been horrible," said Toby, his voice quite steady. "Uncle Angus was a great man. I'll never be able to be as great."

"You'll never know till you try," said the General. He thought that They had not forgotten—They had killed him for losing Them Their war. It was up to him, the General, to see that during his lifetime the peace was kept, to help set up some sort of organisation that would keep the peace when he was gone.

"Will it be okay for me to take this?" Toby had picked up the final figure, and was regarding it reverently.

"What? Oh, I don't see why not."

He said goodbye to the boy outside and got into his car for the drive back to the airfield. Hence, he didn't see Toby carry the unpainted figure the hundred yards to his house, didn't see Toby place it carefully at the end of a row of gay little figures that included Napoleon, Marlborough, Suleiman the Great, Charles XII of Sweden, Henry V, Tamerlaine, Genghis Khan, Charles Martel, Julius Caesar—and newer, or perhaps older, figurines of Alexander the Great, Xerxes, Cyrus the Great, Nebuchadnezzar and a trio of even more primitive conquerors.

"Gee," said Toby to himself, "I'm sorry Uncle Angus had to be killed, But if he had to be killed, I'm glad he got my historical set just about finished. I can paint this cave-man myself."

A few minutes later his mother called him to supper.

THE END

If the name of any living person is used, it is coincidence.
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By R. GARRETT

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